

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-9 (Canceled).

10. (Currently Amended) A turbine having multiple turbine stages, a third turbine stage comprising:

a wheel having ninety wheelposts, each having an interleaved system of fillets and tangs; and

a plurality of buckets each having a corresponding interleaved system of fillets and tangs so that said plurality of buckets can be fitted, one to one, into said ninety wheelposts on said wheel;

wherein said interleaved system of fillets and tangs on said buckets and wheelposts act to reduce stresses acting on said fitted buckets and wheelposts, the fillets and tangs of said interleaved system of fillets and tangs each being formed by a combination of curved and straight surfaces;

wherein the two uppermost tangs on either side of a center line bisecting each of said buckets define two points of a line that form an angle of 25.78° with the center line, each of said points being determined by intersecting tangent lines along pressure faces of the respective said uppermost tangs; and

wherein a point defined by intersecting tangent lines along the pressure faces of the bottommost tang does not lie on either line that forms the angle of 25.78° with the center line.

~~wherein an angle formed by tangent lines along the upper most tangs on either side of a center line bisecting each of said buckets is 51.56° .~~

11. (Currently Amended) A turbine having multiple turbine stages, a third turbine stage comprising:

a wheel having ninety broach slots, each one having an interleaved system of fillets and tangs; and

a plurality of buckets each having a corresponding interleaved system of fillets and tangs so that said plurality of buckets can be fitted, one to one, into said ninety broach slots on said wheel;

wherein said interleaved system of fillets and tangs on said buckets and wheelposts act to reduce stresses acting on said fitted buckets and wheelposts, the fillets and tangs of said interleaved system of fillets and tangs each being formed by a combination of curved and straight surfaces;

wherein the two uppermost fillets on either side of a center line bisecting each of said buckets define two points of a line that form an angle of 25.78° with the center line, each of said points being determined by intersecting tangent lines along pressure faces of the respective said uppermost fillets; and

wherein a point defined by intersecting tangent lines along the pressure faces of the bottommost fillet does not lie on either line that forms the angle of 25.78° with the center line.

~~wherein an angle formed by tangent lines along the upper most filled tangs on either side of a center line bisecting each of said wheelposts is 51.56° .~~

12. (Original) A turbine as claimed in claim 11, wherein the fillets formed on said plurality of buckets have angles ranging from 50° to 59° .

13. (Original) A turbine as claimed in claim 10, each one of said buckets and wheelposts having three interleaved tangs and fillets.

14. (Original) A turbine as claimed in claim 13, wherein each of said buckets having a bottom tang formed from curved surfaces having more than one radius of curvature.

15. (Original) A turbine as claimed in claim 14, wherein each of said buckets further includes at least one straight surface.

16. (Original) A turbine as claimed in claim 10, wherein each of said wheelposts having a bottom fillet formed from curved surfaces having more than one radius of curvature.

17. (Original) A turbine as claimed in claim 16, wherein each of said wheelposts further includes at least one straight surface.

18. (Previously Presented) A turbine as claimed in claim 14, wherein said curved surfaces have radii of curvatures of .1992 inches and .3360 inches.

19. (Previously Presented) A turbine as claimed in claim 16, wherein said curved surfaces have radii of curvatures of .2052 inches and .3420 inches.

20. (Original) A turbine as claimed in claim 10, wherein a top surface of each one of said wheelposts being scalloped so as to reduce the weight of said wheel.

21. (Original) A turbine as claimed in claim 11, each one of said buckets and wheelposts having three interleaved tangs and fillets.

22. (Original) A turbine as claimed in claim 21, wherein each of said buckets having a bottom tang formed from curved surfaces having more than one radius of curvature.

23. (Original) A turbine as claimed in claim 22, wherein each of said buckets further includes at least one straight surface.

24. (Original) A turbine as claimed in claim 21, wherein each of said wheelposts having a bottom fillet formed from curved surfaces having more than one radius of curvature.

25. (Original) A turbine as claimed in claim 11, wherein each of said wheelposts further includes at least one straight surface.

26. (Previously Presented) A turbine as claimed in claim 22, wherein said curved surfaces have radii of curvatures of .1992 inches and .3360 inches.

27. (Previously Presented) A turbine as claimed in claim 24, wherein said curved surfaces have radii of curvatures of .2052 inches and .3420 inches.

28. (Original) A turbine as claimed in claim 11, wherein a top edge of each one of said wheelposts being scalloped so as to reduce the weight of said wheel.

29. (Currently Amended) A bucket for insertion into a wheelpost of a turbine rotor in a third stage of a turbine, said bucket being formed from interleaved fillets and tangs which complement interleaved fillets and tangs formed in the wheelpost,

wherein the two uppermost tangs on either side of a center line bisecting each of said buckets define two points of a line that form an angle of 25.78° with the center line, each of said points being determined by intersecting tangent lines along pressure faces of the respective said uppermost tangs; and

wherein a point defined by intersecting tangent lines along the pressure faces of the bottommost tang does not lie on either line that forms the angle of 25.78° with the center line. ~~an angle formed by tangent lines along the upper most tangs on either side of centerline bisecting each of said buckets is 51.56° and the bottom most tang does not lie along said tangent lines forming said angle.~~

30. (Original) A bucket as claimed in claim 29, said bucket having three interleaved tangs and fillets.

31. (Original) A bucket as claimed in claim 30, said bucket having a bottom tang formed from curved surfaces having more than one radius of curvature.

32. (Original) A bucket as claimed in claim 31, said bucket further including at least one straight surface.

33. (Original) A bucket as claimed in claim 31, said curved surfaces having radii of curvatures of .1992 inches and .3360 inches.

34. (Original) A bucket as claimed in claim 30, said bucket having an upper tang formed from curved surfaces having more than one radius of curvature.

35. (Original) A bucket as claimed in claim 31, said bucket having an upper tang formed from curved surfaces having more than one radius of curvature.

36. (Original) A bucket as claimed in claim 34, said bucket further including at least one straight surface.

37. (Original) A bucket as claimed in claim 30, said bucket having an intermediate tang formed from curved surfaces having more than one radius of curvature.

38. (Original) A bucket as claimed in claim 31, said bucket having an intermediate tang formed from curved surfaces having more than one radius of curvature.

39. (Original) A bucket as claimed in claim 35, said bucket having an intermediate tang formed from curved surfaces having more than one radius of curvature.

40. (Original) A bucket as claimed in claim 37, said bucket further including at least one straight surface.